II. In the Claims

Claims 1-8 (Previously canceled)

9. (Currently amended) A process for permanently attaching an overlay having an outboard surface, an inboard surface, an outer diameter, an inner diameter, a valve stem opening, at least one turbine opening, and a flange area about the outer diameter, to a wheel having an outboard surface, an outer diameter with a wheel rim flange, a valve stem opening, at least one turbine opening, a hub bore, and a bolt pattern, said process comprising the steps of:

locating said overlay in a fixture with its inboard surface exposed and its outboard surface facing downward;

applying a sealant to a predetermined area of said inboard surface of said overlay;

locating said wheel;

placing said wheel in said fixture with its outboard surface facing said inboard surface of said overlay to define an overlay/wheel assembly having a cavity therebetween;

conditioning said overlay/wheel assembly to completely cure said sealant;

heating said overlay/wheel assembly to a predefined temperature within the range of 90°F to 190°F;

clamping said overlay/wheel assembly to a pallet and placing said pallet at an angle with the horizontal in a filling station;

engaging a first set of nests with said overlay/wheel assembly, said first set of nests comprising a bottom nest, a valve stem nest, and at least one turbine opening nest, said bottom nest generally conforming to said outboard surface of said overlay;

injecting liquid foam into said cavity;

selectively engaging a second set of nests with said overlay/wheel assembly, said second set of nests comprising at least one turbine opening nest and a center bottom nest generally conforming to said inner diameter of said overlay and said bolt pattern of said wheel wherein said center nest bottom creates a seal by means of expanding radially when compressed in an axial direction against said wheel;

whereby said second set of nests are selectively engaged as said liquid foam expands within said cavity to fill said cavity such that after all of said nests are engaged said foam completely fills said cavity[.];

disengaging said second set of nests from said overlay/wheel assembly after a predetermined time;

disengaging said first set of nests from said overlay/wheel assembly; and

maintaining light clamping pressure on said overlay/wheel assembly until said foam completely cures.

10. (Original) The process as claimed in claim 9 further comprising the step of applying a vacuum to said overlay before said step of applying a sealant to said overlay.

11. (Original) The process as claimed in claim 9 wherein said step of locating said overlay further comprises:

radially locating said outer diameter of said overlay;

circumferentially locating said overlay off of said valve stem opening of said overlay; and

axially locating said overlay off of said wheel rim flange of said outer diameter of said overlay.

12. (Original) The process as claimed in claim 11 wherein said step of radially locating said overlay further comprises locating said overlay off of said inner diameter of said overlay.

13. (Original) The process as claimed in claim 11 wherein said step of circumferentially locating said overlay further comprises locating said overlay off of said at least one turbine opening of said overlay.

14. (Original) The process as claimed in claim 9 wherein said step of applying said sealant further comprises robotically applying said sealant.

15. (Original) The process as claimed in claim 9 wherein said step of applying said sealant further comprises applying a sealant from the group consisting of silicone, urethane, epoxy, and acrylic.

16. (Original) The process as claimed in claim 9 wherein said step of locating said wheel further comprises:

axially locating said wheel off of said wheel rim flange;

radially locating said wheel off of said wheel rim flange; and

circumferentially locating said wheel off of said valve stem opening.

17. (Original) The process as claimed in claim 16 wherein said step of circumferentially locating said wheel further comprises locating said wheel off of said at least one turbine opening.

18. (Original) The process as claimed in claim 9 further comprising the step of placing said overlay/wheel assembly on a palletized line wherein an individualized pallet can be moved independently through a series of operations before said step of preheating said overlay/wheel assembly.

19. (Original) The process as claimed in claim 18 wherein said step of placing said overlay/wheel assembly on a palletized line further comprises placing said overlay/wheel assembly on an individual pallet having independent clamping means to hold said overlay on said wheel so as to maintain light clamping pressure until said liquid foam cures.

20. (Original) The process as claimed in claim 9 wherein said step of engaging said first set of nests further comprises engaging a bottom nest manufactured by pour-in-place techniques of a material chosen from the group consisting of high durometer silicone, epoxy, and urethane.

21. (Original) The process as claimed in claim 9 wherein said step of engaging said first set of nests further comprises engaging a bottom nest manufactured by casting a material chosen from the group consisting of aluminum, steel, and kirksite.

22. (Original) The process as claimed in claim 9 wherein said step of engaging said first set of nests further comprises engaging a bottom nest manufactured by milling a material chosen from the group consisting of aluminum and steel.

23. (Original) The process as claimed in claim 9 wherein said step of engaging said first set of nests further comprises engaging a valve stem nest and at least one turbine opening nest independently, allowing independent movement for locating said overlay to said wheel.

24. (Original) The process as claimed in claim 9 wherein said step of clamping said overlay/wheel assembly to a pallet further comprises:

clamping said overlay/wheel assembly to said pallet by a clamping system having an upper stationary platen and a lower moving platen below said upper stationary platen; and

raising said lower moving platen towards said upper stationary platen whereby said overlay/wheel assembly is held between said upper and lower platens.

25. (Original) The process as claimed in claim 19 wherein said step of placing said overlay/wheel assembly on an individual pallet having independent clamping means further comprises placing said overlay/wheel assembly on an individual pallet having independent clamping means comprised of a plurality of mechanical toggles that sandwich said overlay/wheel assembly to said individual pallet and said bottom nest.

Claims 26-32 (Withdrawn)

33. (Previously added) A process for permanently attaching an overlay having an outboard surface and an inboard surface to a wheel having an outboard surface and at least one predefined opening therein, said process comprising the steps of:

locating said overlay in a fixture;

placing said wheel in said fixture and on said inboard surface of said overlay thereby defining a cavity between said outboard surface of said wheel and said inboard surface of said overlay;

heating said overlay and said wheel to a predetermined temperature;

clamping said overlay and wheel to a pallet;

engaging at least one nest with said wheel and said overlay;

injecting a foamable liquid into said cavity; and

disengaging said at least one nest.